

Comments on Draft Preliminary (30%) Remedial Design Report
Pohatcong Valley Groundwater Contamination Superfund Site OU3

General Comments:

1. **Soil Confirmation Sampling** – The extent and timing of the collection of ROD-required soil confirmation sampling will be assessed based on performance monitoring data including temperature, diminishing returns, energy input, etc. (Where should this text be added to Report? Section 8.0, Pg. 32 paragraph one? Maybe the last 2 sentences of that para should be deleted and replaced with this text ?)

2. Indicate whether the current sub slab depressurization system will need to be expanded to effectively protect workers during heating operation.

Commented [HEMCUC(1): I agree on the location (Section 8, first paragraph, p 32 of 37). Either request they delete the last two sentences or acknowledge the challenges, but change “is not considered practicable” to “presents logistical challenges”

Specific Comments:

Section 2. Basis of Design

1. **Section 2.5.2, Target Treatment Zone, Page 16, first paragraph** - “Each boring will be sampled to a depth of approximately 122 feet bgs, or until competent bedrock is encountered, whichever is shallowest.” Please collect soil samples until competent bedrock is encountered.

At PDI borings SB25 and SB26, the deepest sample interval was collected at 121.5-122.0 ft bgs, and results were near but not below the cleanup goal (1.39 mg/kg at SB26 and 1.23 mg/kg at SB25). Please collect soil samples until competent bedrock is reached to ensure the extent of TCE >1 mg/kg is defined above competent bedrock.

Section 3. In Site Thermal Remediation System Design

1. **Section 3.9.5 Vapor Phase Carbon System and 3.10.3, Liquid Phase Carbon** – Include the estimated size of the VGAC and LGAC vessels. Also include Design Calculations in the 90% design report.

Section 7. Operations, Maintenance and Monitoring

1. **Section 7.2.2, Vapor Sampling** – Since temperature, energy input, and mass recovery are important lines of evidence, please incorporate the following changes ~~in~~ to the influent vapor monitoring frequency:

- Collect PID readings at vapor influent 5 times/wk instead of the specified weekly frequency
- Collect vapor samples at least monthly between startup and achievement of 50°C
- Collect biweekly vapor influent samples from 50°C throughout the duration of operation.

Can the GC with ECD used for real-time TCE monitoring of indoor air and subslab vapor samples be utilized to periodically analyze total vapor influent to the VGAC?

2. **Section 7.2.2, Vapor Sampling** - The metric for diminishing returns or asymptotic conditions that qualifies the site for shutdown needs to be further defined in the 90% RD.

For example, will a rate of change over time, a % of the total peak and rate of change over time, or flat recovery rate (e.g., 0.5 lb/day) be used as an indicator of asymptotic conditions and over a 2-3 week period? This also needs to be contingent on achieving the temperature metric.

In the 90% RD, please specify methods for determining whether partial shutdown is pursued. For example, will the TTZ be segregated into zones where mass recovery is tracked in each zone over time?

3. **Section 7.4, Vapor Intrusion Mitigation System Operations and Monitoring** –

- Please ensure EPA is notified immediately in the event of an indoor air exceedance.
- EPA requests access to indoor air remote monitoring website.
- Please specify the indoor air monitoring locations in the 90% report.

4. **Section 7.5, System, Operations Reporting** – Submit monthly progress reports instead of quarterly. Please provide EPA with advance notice of intent to shut the system down. More frequent reporting will help ensure this decision can be made in a timely manner.

Section 8. Post- Remediation Performance Verification Plan

1. **Section 8.2, Subsurface Temperature, Page 16, 1st Paragraph** – The target temperature is 100°C, yet the operational target temperature goal is achievement of 87°C in 95% of the sensors (indicating attainment of RG of 1 mg/kg TCE). The intent is to reach 100°C within the TTZ, as shown in Appendix A, Section 3.4.

Please increase the temperature metric to achievement of 95°C in 95% of the temperature sensor locations.

Also, change the RG from 1 ug/kg to 1 mg/kg.

FIGURES:

Figure 2 – Location of Operable Unit 3

1. Add POHMW49 to Figure 2.

Figure 7 – TCH Target Treatment Zone

1. During installation of the 4 additional soil characterization borings within the ovals, please convert the inner most soil boring (assuming field screening indicates mass is present) into a temperature monitoring point to augment temperature monitoring in an area where the vertical spacing between angled heaters is the greatest.²

Appendix B – Preliminary Design Drawings:

General:

1. Provide a well diagram showing how the vertical and angled heater wells with collocated steam and vapor recovery wells ~~VFWs~~ will be constructed.
2. Please incorporate vacuum/pressure monitoring points into the design to verify pneumatic capture (e.g., use of existing VMP 1, 2, 3, new points, or collocated with temperature monitoring points).²